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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,791	06/21/2006	Jianfei He	U 016341-8	8541

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LADAS & PARRY LLP  
26 WEST 61ST STREET  
NEW YORK, NY 10023

EXAMINER
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MANSOURY, NOURALI

ART UNIT	PAPER NUMBER
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2475

NOTIFICATION DATE	DELIVERY MODE
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10/26/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

nyuspatactions@ladas.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,791	<b>Applicant(s)</b> HE, JIANFEI	
	<b>Examiner</b> NOURALI MANSOURY	<b>Art Unit</b> 2475	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-4, 6, 8-14, are objected to under 37 C.F.R. 1.75 because of the following informalities:

In claim 1 line 18, second occurrence, "traffic" and seems to refer back to "traffic" recited at line 13 in claim 1, first occurrence. If it is true, it is suggested to change "traffic" to ---- the traffic ----.

In claim 6 line 8, second occurrence, "packet bus" and seems to refer back to "packet bus" recited at line 5 in claim 6, first occurrence. If it is true, it is suggested to change "packet bus" to ---- the packet bus ----.

Claims 2-4, 8-14, are objected to as being dependent upon objected base claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6, 8-13, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the data service processing unit" in lines 3-5. There is insufficient antecedent basis for this limitation in the claim.

Claims 8-13, are rejected to as being dependent upon rejected base claim.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-2, 4-6, 8-13, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 currently recites “An integrated cross-switching unit, connected with a TDM (Time Division Multiplexing) line unit and a data service processing unit, wherein the integrated cross-switching unit comprises: a bus identification module; a cross-connecting module; a mapping/de-mapping module; an encapsulation/de-encapsulation module; and a packet scheduling module” which is silent in the specification, therefor examiner assumes it is a software per se. Same rejection applies to claims 2,4-6 and 8-13.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-4, 5-6, are rejected under 35 U.S.C. 102(a) as being anticipated by Field et al. (US 6621828).

Regarding claim 1, 5 and 6, Field et al. discloses an integrated cross-switching unit (Fig. 1 element 14) and corresponding a traffic scheduling method (col 1 lines 66-67), which is connected with a TDM (Time Division Multiplexing) line unit and a data

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service processing unit, wherein the integrated cross-switching unit (col 6 lines 26-31, col 1 lines 51-50, Fig. 3 element 44) comprises: a bus identification module (Fig. 2 element 40, col 6 lines 34-37); a high-order cross-connecting module (Fig. 2 element 44, col 6 lines 28-30 [inherent both higher and lower order cross-connecting module]); a high-order mapping/de-mapping module (col 12 lines 35-42, col 16 lines 41-45 [inherent both higher and lower order mapping/de-mapping module]); a high-order encapsulation/de-encapsulation module (col 6 lines 38-51, e.g., The ATM line cards 40 also perform ATM layer function such as processing operation, administration, and management (OAM) cells and perform monitoring functions. Packet based line cards 40 segment and resemble (SAR) packets into generic ATM cells. Ethernet line cards 40 examine source address (SA) and destination address (DA) of the ethernet packets in order to map the packet flow into a cell flow, that therefore inherent both higher and lower order encapsulation/de-capsulation); a high-order packet scheduling module (col 6 lines 20-31, e.g., The cell based switching switches ATM cell traffic, ATM adaption layer (AAL) cell traffic, and segmented packet traffic on a frame-based schedule, that therefore inherent both higher and lower order packet scheduling module, Fig. 18 element 356); a low-order cross-connecting module (col 6 line 20-31, e.g., the switch core 44 may also convert traffic between the TDM and ATM realms to establish cross connections between the line cards 40, that therefore inherent both higher and lower order cross-connecting module); a low-order mapping/de-mapping module (col 12 lines 35-42, col 16 lines 41-45 [inherent higher and lower order mapping/de-mapping module]); a low-order encapsulation/de-encapsulation module (col 6 lines 38-51, e.g.,

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The ATM line cards 40 also perform ATM layer function such as processing operation, administration, and management (OAM) cells and perform monitoring functions. Packet based line cards 40 segment and resemble (SAR) packets into generic ATM cells.

Ethernet line cards 40 examine source address (SA) and destination address (DA) of the ethernet packets in order to map the packet flow into a cell flow, that therefore inherent both higher and lower order encapsulation/de-capsulation); and a low-order packet scheduling module (col 6 lines 20-31, e.g., The cell based switching switches ATM cell traffic, ATM adaption layer (AAL) cell traffic, and segmented packet traffic on a frame-based schedule, that therefore inherent both higher and lower order packer scheduling module, Fig. 18 element 356); wherein the bus identification module identifies a traffic source by reporting a slot number corresponding to the data service processing unit and a unit type of the data service processing unit to a control unit via the data service processing unit and by identifying the type of a bus connected with the data service processing unit as a packet bus, to transmits traffic from the TDM line unit to the high-order cross-connecting module, and to transmits packets from the data service processing unit to the high-order packet scheduling module (col 6 lines 34-37, col 30 lines 62-66 [slot number], Fig. 3 element HAS or TSB (type of data), HAS BUS or TSB Bus (type of bus), element 70 or 72 (packet bus), col 19 lines 65-67, col 7 lines 1-2); the high-order cross-connecting module schedules the traffic as required for low-order processing to the low-order cross-connecting module, and to performs high-order scheduling on time slots of the traffic from the TDM line unit; the low-order cross-connecting module performs low-order scheduling on time slots of the traffic from the

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TDM line unit; the high-order and low-order mapping/de-mapping modules are adapted to de-map the traffic from the high-order and low-order cross-connecting modules correspondingly, and to map traffic from the high-order and low-order encapsulation/de-encapsulation modules respectively (col 12 lines 35-42, col 16 lines 41-45 [inherent higher order mapping/de-mapping module]); the high-order and low-order encapsulation/de-encapsulation modules are adapted to de- encapsulate the traffic from the high-order and low-order mapping/de-mapping modules correspondingly, and to encapsulate the packets from the high-order and low-order packet scheduling modules respectively (col 19 lines 53-67, FIG. 18 is a block diagram illustrating details of the bus fuser of FIG. 17 (the fused TDM/ATM switch card and the high capacity ATM switch card of FIG. 3); the high-order packet scheduling module schedules the packets from the high-order encapsulation/de-encapsulation module and/or the bus identification module and to transmit the scheduled packets to the data service processing unit via packet bus or to the TDM line unit via the high-order encapsulation/de-encapsulation module, the high-order mapping/de-mapping unit, and the high-order cross-connecting module in turn (col 6 lines 20-31, e.g., The cell based switching switches ATM cell traffic, ATM adaption layer (AAL) cell traffic, and segmented packet traffic on a frame-based schedule, that therefore inherent both higher and lower order packer scheduling module, Fig. 18 element 356, col 32 lines 20-34); the low-order packet scheduling module is adapted to schedules the packets from the low-order encapsulation/de-encapsulation module and to transmit the scheduled packets to the TDM line unit via the low-order encapsulation/de-encapsulation module, the low-order mapping/de-

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mapping unit, and the low-order cross-connecting module in turn (col 6 lines 20-31, e.g., The cell based switching switches ATM cell traffic, ATM adaption layer (AAL) cell traffic, and segmented packet traffic on a frame-based schedule, that therefore inherent both higher and lower order packer scheduling module, Fig. 18 element 356, col 6 lines 38-46).

Regarding claim 2, Field et al. discloses wherein a plurality of physical channels are configured between the mapping/de-mapping module and the encapsulation/de-encapsulation module, and between the encapsulation/de-encapsulation module and the packet scheduling module (col 12 lines 35-42, FIG. 7 is a block diagram illustrating transport of asynchronous transfer mode (ATM) traffic in the TSB frame).

Regarding claim 3, Field et al. discloses wherein the plurality of physical channels are configured with different encapsulation protocols respectively (col 16 lines 32-51).

Regarding claim 4, Field et al. discloses wherein for the GFP frames from different physical channels, the encapsulation/de-encapsulation module finds CID field in the extended header of each GFP frame and directly forwards the data GFP frame with the CID field into the corresponding physical channel (col 15 lines 43-55).

Regarding claim 14, Field et al. discloses wherein the TDM line unit is a synchronous digital hierarchy or synchronous optical network line unit (col 5 lines 58-65).



***Response to Remarks***

7. This communication is considered fully responsive to the Amendment filed on 08/07/2008.
  - a. Previous objections to the claims have been withdrawn since it has been amended accordingly.
  - b. Previous objections to the drawings have been withdrawn since it has been amended accordingly.
  - b. Previous rejections to the claims under second paragraph of 35 U.S.C. 112 have been withdrawn since it has been amended accordingly.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1, 5-6 have been considered but are moot in view of the new ground(s) of rejection.
9. Applicant's arguments filed on 08/13/2010 have been fully considered but they are not persuasive.
10. On pages 15-17 of the applicant's response, applicant contents that Diaz relates to the building of three unique bus overlays on the same physical bus configured to service three different types of telecommunications services. However, the present application provides an integrated cross-switching unit which is connected with both of the TDM line unit and the data service processing unit and can identify the traffic source, thus the use of only one such integrated cross-switching unit can reduce the number of the backplane buses.

11. The examiner respectfully disagrees with the Applicant's argument because Field et al. discloses an integrated cross-switching unit which is connected with both of the TDM line unit and the data service processing unit and can identify the traffic source (for further clarification see FIG. 3 is a block diagram illustrating communication busses, switch cards and line cards of the node of FIG. 2).

12. In the present application, Applicant also argues, on pages 16-17 of the remarks, that it is clear that the features "by reporting a unit type of the data service processing unit to a control unit" and "by identifying the type of a bus connected with the data service processing unit as a packet bus" are not disclosed by Diaz.

13. The examiner respectfully disagree with the Applicant's argument, because Field et al. discloses by reporting a unit type of the data service processing unit to a control unit" and "by identifying the type of a bus connected with the data service processing unit as a packet bus" as recited in claim 1 (col 30 lines 57-66 [slot number], Fig. 3 element HAS or TSB (type of data), HAS BUS or TSB Bus (type of bus), element 70 or 72 (packet bus), col 19 lines 65-67, col 7 lines 1-2).

14. Applicant argues on page 17 of the remarks, that Independent claims 5 and 6 are respectfully submitted to be patentable under 35 U.S.C. § 103(a) for at least the same reasons as discussed above in connection with amended claim 1.

15. The examiner respectfully disagrees with applicant's argument, because similar rejection as discussed above with reference to claim 1; claims 5 and 6 are likewise in condition for rejection.

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16. Therefore, in view of the above reason, examiner maintains rejections.

***Conclusion***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOURALI MANSOURY whose telephone number is (571)270-5671. The examiner can normally be reached on Monday-Thursday, 12:00-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner  
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/DANG T TON/

Supervisory Patent Examiner, Art Unit 2475/D. T. T./

Supervisory Patent Examiner, Art Unit 2475